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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,813	07/14/2003	Jae Won Chang	0465-1037P	4176

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EXAMINER

PATEL, RITA RAMESH

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/617,813

Applicant(s)

CHANG, JAE WON

Examiner

Rita R. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Response to Applicant's Amendments

This Office Action is responsive to the amendment filed on 7/14/06. Claim 9 has been canceled and claims 19-21 have been added. Claims 1-8 and 10-21 are pending. Claims 1-8, 10-11, 14, and 17-18 have been amended. Applicant's arguments have been considered, but are not persuasive. However, upon further consideration due to amendments made, the instant claims are rejected under new grounds of rejections and thus claims 1-8 and 10-21 are finally rejected for the reasons of record.

Specification

The disclosure is objected to because of the following informalities: on page 11 of the specification, Paragraph [0038], line 2, it is written "an end surface being formed in form". This disclosure does not follow grammatically; appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 and 10-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell (US Patent No. 2,474,370) and further in view of Altnau (US Patent No. 4,250,724).

Russell teaches a flywheel comprising a hub 10, a rim 14, and spokes 12, 12a, 12b, 12c, having channeled cross section with face thereof normal to the axis of the flywheel, a plurality of ribs bridging the spoke channels at the ends thereof adjacent the rim whereby to provide a continuous rim channel discontinuous with the several spoke channels (col. 1, lines 51-56; col. 2, line 1). An object of the present invention disclosed by Russell is to produce a structure having the desired mass and balance (col. 1, lines 18 and 22-23); as well as, a means for firmly securing a weight-imparting set-hardenable substance within the rim of a flywheel (col. 1, lines 37-40). Russell teaches the hub 10 is provided with a central aperture 18 for journaling the flywheel to any desired shaft of an engine and having associated therewith a slot 20 and an inner groove 22 for keying the flywheel to the shaft by any suitable means, also providing a plurality of reinforcing ribs 24 integral with the hub 10 and extending radially thereof form an integral portion of the channeled side walls of the spokes and serve to reinforce the spokes (col. 2, lines 55-56; col. 3, lines 1-8).

Russell's disclosure of outer rim 14 reads on applicant's claim for an extension member from the outer surface of the fixing member in a radial direction; therein rim 14 Russell discloses a substantial portion of its weight is imparted by a set-hardenable substance such as concrete; the set-hardenable material may or not be reinforced, and also any other set-hardenable substance having the desired weight-imparting properties

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may be employed. It is commonly known in the art of washing machines for a washing machine to vibrate. Washing machines may vibrate radially/rotationally, in addition to vertically; up and down movement of a washing machine may commonly occur during rotation /washing because the clothes within the tub may be distributed unevenly, thus causing the tub to move up and down a bit, while being spun. Therefore, the extension member and the mass member are fully capable of being vibrated in radial and up/down directions. The flywheel of Russell is inherently used as a structure for providing desired mass and balance; hence, minimizing rotational and up/down vibrations is taught by Russell.

Although Russell does not stately express an outer tub, Russell does teach said invention may be attached to any desired shaft of an engine; thus, reading on an attachment to a washing machine. Furthermore, the bottom wall of a washing machine would provide as a supporting member coupled with the fixing member. In Figure 1 it is shown that the flywheel is in a ring form. Also, slot 20 located about the radial groove 22 for connecting said wheel to a fixing member is also in a ring form, hence showing a deliberately designed connection for attachment to a fixing member of a ring form. As seen in Figure 1, each of the ribs, 12, 12a, 12b, 12c, are formed such that a first end is connected to the outer surface of the fixing member and a second end is connected to an inner surface of the mass member.

Moreover, Russell does not explicitly teach a bearing housing provided at a bottom of an outer tub, Russell does disclose attaching said flywheel to the shaft by any

suitable means, and it is well known in the art to use bearings encompassed within a bearing housing within washing machines for integrally attaching an absorber thereunto.

Russell teaches the claimed invention, however, fails to provide an explicit teaching of a cabinet, outer tub, inner tub, bearing housing, driving motor and drive shaft for said washing machine. Altnau, however, discloses a suspension system for a washing machine including a tub assembly having an outer stationary tub and an inner clothes receiving tub mounted for rotation on a central shaft extending downwardly through the lower wall of the stationary tub operatively connected to a transmission which serves as a drive mechanism for the washing machine. A balance ring member is coupled to the central shaft for rotation therewith and is located as near as is practical to the true center of mass of the inner rotatable tub and washing machine drive mechanism, for stabilizing the rotating tub during high speed spinning, even when a clothes load in the tub is out of balance. The balance ring assembly 106 is located thereupon the bearing housing assembly 72. It would be obvious to one of ordinary skill in the art at the time of the invention to integrally combine a washing machine in Russell for balancing washing machines in operation, as shown by Altnau, with expectation of providing stability and resilient support during operation of said washing apparatus (col. 4, lines 65-68; col. 5, line 1).

In claims 10 and 21, applicant claims a stiffness of the extension member is tuned to a rated rotation in order to reduce vibrations of the outer tub at the rated rotation during dehydration. Furthermore, in claims 19 and 20 applicant claims the mass of the mass member is tuned to a rated rotation in order to reduce vibrations of

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the outer tub at the rated rotation during dehydration. Russell's disclosure of rim 14 reads on applicant's claim for an extension member; Russell's disclosure of a set-hardenable-material reads on applicant's claim for a mass member. Moreover, Russell teaches that the set-hardenable material which is inserted within the rim 14 may be one of any other set-hardenable substances having the desired weight-impairing properties for employment. Therefore, the mass member of Russell may be tuned to a rated rotation in order to reduce vibrations, by means of selecting the appropriate material composition of the set-hardenable material. It would have been obvious to one of ordinary skill in the art at the time of the invention to also modify the material composition of the extension member in order to minimize vibrations and adequately hold the selected set-hardenable material therein; too pliable or light-weight of a material may deform if the set-hardenable material held therein is too heavy. Vice versa, too heavy or dense material composition of the extension and too light-weight a set-hardenable material used therein may be cost inefficient. It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize and make adjustable the material compositions of the extension member and mass members since it has been held that the provision of adjustability, where needed, involves only routine skill in the art. *In re Stevens*, 101 USPQ 284 (CCPA 1954).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita R. Patel whose telephone number is (571) 272-8701. The examiner can normally be reached on M-F: 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RRP



MICHAEL BARR
SUPERVISORY PATENT EXAMINER